

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Sherwin-Williams Plant Fire Response - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region VI

Subject: POLREP #12
Progress - Amended 8/19/2023
Sherwin-Williams Plant Fire Response
A6WT
Garland, TX
Latitude: 32.9080210 Longitude: -96.6667990

To: Craig Carroll, Region 6
Brendan Roache, OEM
Anthony Buck, TCEQ

From: Eric Delgado, FOSC
Date: 8/18/2023
Reporting Period: 8/18/2023

1. Introduction

1.1 Background

Site Number:	A6WT	Contract Number:	
D.O. Number:		Action Memo Date:	
Response Authority:	CERCLA	Response Type:	Emergency
Response Lead:	EPA	Incident Category:	Removal Action
NPL Status:	Non NPL	Operable Unit:	
Mobilization Date:	8/7/2023	Start Date:	8/7/2023
Demob Date:		Completion Date:	
CERCLIS ID:	TXN000622299	RCRIS ID:	
ERNS No.:		State Notification:	
FPN#:		Reimbursable Account #:	

1.1.1 Incident Category

CERCLA emergency response with Potentially Responsible Party (PRP) oversight at a paint manufacturing facility.

1.1.2 Site Description

1.1.2.1 Location

The incident occurred at an active paint manufacturing facility in Garland, Texas. The facility is located within a primarily commercial/industrial area at 701 South Shiloh Road, Garland, Dallas County, Texas 75042 (Site). A large residential neighborhood is located approximately 0.25 miles southeast of the Site. Two bodies of water, Stream 2C4 and Duck Creek, flow through the residential neighborhood.

1.1.2.2 Description of Threat

The following table provides a list of chemicals that were potentially released from the facility:

Hydrogen Cyanide	Ammonia	Ethylene glycol	n-Butyl acrylate
PFAS	Ammonium hydroxide	Ethylene glycol monohexyl ether	Nonylphenoxypoly(ethoxy)ethanol
1,2,4-Trimethylbenzene	Ammonium persulfate	Ethylene glycol monoprophyl ether	o-Xylene
1,4-Dioxane	Benzene	Ethylene oxide	Pentadecaflourooctanoic acid (PFAO)
1-Butanol	Bisphenol A	Formaldehyde	Propylene oxide
2-Butoxyethanol	Cumene	Formic acid	Sodium nitrate
2-Pentanone, 4-methyl-	Cyclohexane	Hexachlorobenzene	Styrene
2-Phenoxyethanol	Dibenzoyl peroxide	Hexamethylene diisocyanate	Tert-Butyl alcohol
4,4-Methylenediphenyl diisocyanate	Diethanolmine	Hydroquinone	Toluene
4-Nonylphenol, branched and linear, ethoxylated	Diethylene glycol monobutyl ether	Isocyanic acid, polymethylenopolyphenylene ester	Triethylamine
Acetaldehyde	Diethylene glycol monoethyl ether	Methyl alcohol	Xylenes
Acrolein	Epichlorohydrin	Methyl methacrylate	Zinc pyrithione
Acrylamide	Ethyl acrylate	Naphthalene	
Acrylic Acid	Ethylbenzene	Naphthenic acids, zinc salts	

The facility was unable to shutoff the fire suppression system during the incident which resulted in the release of an unknown amount of aqueous film-forming foam (AFFF) and firewater into storm drains that discharged into Stream 2C4. Stream 2C4 flows into Duck Creek which ultimately flows into the East Fork of the Trinity River. The EPA and TCEQ have received odor complaints from residents.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

EPA and Sherwin Williams continue to operate in Unified Command to accomplish the following incident operational objectives:

1. Conduct air monitoring in community based upon odor complaints managed in UC tracking database.
2. Conduct flushing operations of stream 2C4 to the dam located on Duck Creek.
3. Conduct water sampling at the 10 fixed stations along Duck Creek and the East Fork of the Trinity River.
4. Conduct composite soil sampling (VOC/SVOC/PFAS) in residential properties on a 3 ft area parallel to the creek to confirm that those areas were not impacted.
5. Conduct soil/sediment sampling (TCEQ to determine) along the drainage pathway along the west side of the facility to Stream 2C4.
6. Conduct removal of Dam 1 and 2 on Duck Creek prior to any projected rainfall event that may compromise the dams and spread soils downstream.

2.1.2 Response Actions to Date

8/7/2023

Upon confirmation that the fire was extinguished, Sherwin Williams discovered that two acrylic acid polymer tanks' cooling systems were impaired and unable to maintain temperatures to avoid rapid polymerization. Sherwin Williams began running a temporary cooling process to stabilize tank temperatures, actively measured and recorded the tanks temperatures, and reported their findings to responding agencies. The EPA Federal On-Scene Coordinator (FOSC) and State OSC advised Sherwin Williams to remove the remaining materials from the acrylic acid polymer tanks and dispose of the materials off-site.

FOSC Eric Delgado arrived onsite at approximately 1pm and EPA START contractors arrived onsite at approximately 1:30pm. EPA conducted community air monitoring using a MultiRAE Pro equipped with a hydrogen cyanide sensor, a Draeger XPID 9500 to analyze for acrylates, benzene, toluene, ethylene, xylene, and styrene, and a personalDataRam pDR1500 to monitor for particulate matter less than 2.5 micrometers in diameter (PM 2.5). TCEQ conducted air monitoring with its DUVAS vehicle. The detection limits and community action levels for the chemicals of concern (CoCs) at the time are listed below:

CoCs	Instrument	Instrument Detection Limit Range	Community Action Level
Methyl Methylacrylate	XPID9500	2.5 - 275 ppm	17 ppm
Styrene	XPID9500	1.0 - 300 ppm	15.6 ppm
Hydrogen Cyanide	MultiRAE Pro	0.5 - 50 ppm	1 ppm
Benzene	XPID9500	0.02 - 25 ppm	0.54 ppm
Toluene	XPID9500	0.33 - 100 ppm	12 ppm
Xylene	XPID9500	1.0 - 300 ppm	5.1 ppm
Ethyl Acrylate	XPID9500	1.0 - 200 ppm*	8.3 ppm
Butyl Acrylate	XPID9500	*	8.3 ppm
PM 2.5	pDR-1500	1 - 400,000 micrograms/m³	250 micrograms/m³

*Results are qualified, but not quantified as the concentration calculation is based on simplified assumptions with modest demands of accuracy.

EPA monitored for methyl methylacrylate, styrene, hydrogen cyanide, benzene, toluene, xylene, ethyl acrylate, butyl acrylate, volatile organic compounds (VOCs), and PM 2.5. VOCs, including benzene, and PM 2.5 were detected during air monitoring activities; however, the readings were below the site-specific community action levels. EPA also activated the ASPECT aircraft to obtain optical and thermal imagery of the Site. EPA observed that approximately 7.4 miles of surface water consisting of Stream 2C4 and Duck Creek were impacted by AFFF and firewater. Sherwin Williams began containment and recovery efforts along Stream 2C4 and Duck Creek and informed EPA they had additional resources on the way to supplement surface water containment and recovery efforts. EPA observed dead fish at several areas in Stream 2C4.

8/8/2023

On 8/8/2023, at approximately 12am, EPA stopped air monitoring activities since all 8/7/23 readings were below the site-specific action levels. Sherwin Williams continued community air monitoring. At approximately 3am, TCEQ informed EPA

that the dam installed at Wynne Park had failed. The dam wasn't repaired until the afternoon of 8/8/2023. An additional dam was constructed near the failed dam location. A third dam was constructed near the Guthrie Bridge in the vicinity of I30 and Broadway Blvd. EPA continued documentation of the recovery/containment operations, sampling operations, and wildlife impacts and served Sherwin Williams with a CWA Section 311 Administrative Order (311c), Declaration in Support of the Administrative Order, and Statement of Work. EPA activated the Poison Control Center to respond to health-related questions from the public and provide situation reports summarizing the nature of calls from the public as needed.

8/9/2023

EPA mobilized ERRS HAZMAT specialists to review Sherwin William's workplan which outlined the procedures for the transfer of acrylic acid and methacrylic acid from the RT9 and RT10 Aboveground Storage Tanks (ASTs) into tanker trucks which would transport materials to their final off-site destinations. EPA provided comments to Sherwin Williams on the workplan. Sherwin Williams addressed EPA's comments and a final workplan was approved by EPA. In the event of a worst-case scenario involving the tanks, EPA requested that Sherwin Williams provide a contingency plan. Sherwin Williams provided EPA with the requested contingency plan. Sherwin Williams continued recovery and containment operations in impacted waterways.

8/10/2023

EPA contracted HAZMAT specialists provided oversight of Sherwin Williams efforts to transfer acrylic acid and methacrylic acid from the facility ASTs to tanker trucks. Sherwin Williams completed the transfer operation and transported the tankers offsite at approximately 9pm. EPA coordinated with TDEM to conduct flyovers of the East Fork Trinity River and Trinity River in an effort to identify the furthest extent of visible AFFF on waterways. An EPA toxicologist arrived onsite on the morning 08/10/23. The EPA toxicologist assisted with reviewing analytical results from Sherwin Williams' and TCEQ's sampling efforts, provided feedback on site-specific data quality objectives and supported EPA's public risk communication efforts. Sherwin Williams started door-to-door requests to gain access to the properties. EPA, TCEQ, TP&W, and the City of Garland continued documentation of the recovery and containment operations, sampling operations, and wildlife impacts.

8/11/2023

EPA identified a location on the Trinity River appropriate for final recovery and containment based on observations made by the EPA's Offsite Recon team and video footage of the furthest extent of visible AFFF foam on water from the 8/10/2023 flyovers of the East Fork Trinity River and Trinity River. Sherwin Williams began identifying access points for a foam fractionation process to aerate impacted waters and collect fractionated foam at the final recovery and containment location recommended by EPA.

Sherwin Williams recovered AFFF impacted waters using a foam fractionation process at the Wynne Park dam location and conducted community air monitoring near the dam location as aerating impacted waters agitates dissolved VOCs and SVOCs out of the water column. No VOC readings above instrument detection limits were observed in the nearby community. Sherwin Williams continued door-to-door requests to gain access to residential properties and obtained agreement forms from approximately 30 properties.

8/12/2023

EPA continued providing oversight and documentation of Sherwin Williams containment and recovery efforts and surface water sampling efforts. Sherwin Williams continued recovering AFFF impacted waters using a foam fractionation process at the Wynne Park dam location and conducted community air monitoring near the dam location. No VOC readings above instrument detection limits were observed in the nearby community. Additionally, Sherwin Williams constructed a second dam approximately 150 feet downstream of the upstream dam location. Sherwin Williams began moving the final containment and second foam fractionation recovery location to a location off E Malloy Bridge Road in Seagoville, TX. The nearest residence to the final containment and recovery location is approximately 1 mile away so Sherwin Williams did not conduct air monitoring at the location. Sherwin Williams also continued door-to-door requests to obtain access to residential properties and obtained around 5 additional access agreements.

8/13/2023

EPA continued providing oversight and documentation of Sherwin Williams containment and recovery efforts and surface water sampling efforts. EPA did not receive any new data on 8/13/2023. A TCEQ water monitoring team dispatched along the east fork of the Trinity River in Kaufman County in response to AFFF foam sightings. The team observed visible foam along riverbank near the North Texas Municipal Water District reuse facility along FM 3039. TCEQ inspected the Wynne Park dam integrity after being notified that City personnel had flushed water lines upstream of the dam. Dam integrity was not compromised. Texas Parks and Wildlife (TP&W) visited Duck Creek to observe cleanup and wildlife response activities. Over 1,000 dead fish were recovered from a 500-meter section of Duck Creek near Tinsley Park in Garland. Most of the recovered fish had been dead for several days.

Sherwin Williams continued recovering AFFF impacted waters using a foam fractionation process at the Wynne Park dam location and conducted community air monitoring near the dam location. No VOC readings above instrument detection limits were observed in the nearby community. Sherwin Williams conducted drone overflights of impacted waterways to determine a more appropriate location to place the final containment and second foam fractionation recovery location. Sherwin Williams also continued door-to-door requests to obtain access to residential properties and obtained approximately 44 right of entry agreements to date.

8/14/2023

EPA continued providing oversight and documentation of Sherwin Williams containment and recovery efforts and surface water sampling efforts. TP&W visited six locations to observe cleanup and wildlife response activities; however, no dead fish were observed on 8/14/2023.

Sherwin Williams continued recovering AFFF impacted waters using a foam fractionation process at the Wynne Park dam location and conducted community air monitoring near the dam location. No VOC readings above instrument detection limits were observed in the nearby community. Sherwin Williams moved the final containment and second foam fractionation recovery location to a location approximately 5 miles downstream of the Wynne Park dam location based on recommendations by EPA and TCEQ. Sherwin Williams began to pump water downstream of the Wynne Park dam location. Sherwin Williams also continued door-to-door requests to obtain access to residential properties. Sherwin Williams continued drone operations to collect aerial imagery.

8/15/2023

EPA continued providing oversight and documentation of Sherwin Williams containment and recovery efforts and surface water sampling efforts. TCEQ observed and documented a location possibly containing foam however, the foam appeared to be unrelated to site activities. TP&W visited three locations to observe cleanup and wildlife response activities. The following dead wildlife were observed:

- 269 fish including mosquitofish, sunfish, and bullhead catfish
- 1 Anole Lizard
- 1 Softshell Turtle
- 1 rabbit

Sherwin Williams continued recovering AFFF impacted waters process at the Wynne Park dam location and conducted community air monitoring near the dam location. No VOC readings above instrument detection limits were observed in the nearby community. Sherwin Williams removed the final containment and second foam fractionation recovery location downstream of the Wynne Park dam as the fractionation process was no longer generating foam. Sherwin Williams established 10 fixed surface water sampling locations starting from Duck Creek and spanning 53 river miles into the Trinity River. Sherwin Williams also continued door-to-door requests to obtain access to residential properties and obtained approximately 70 right of entry agreements to date. Sherwin Williams continued drone operations to collect aerial imagery.

8/16/2023

EPA continued providing oversight and documentation of Sherwin Williams containment and recovery efforts and surface water sampling efforts. Sampling continued at the 10 fixed surface water sampling locations in impacted waterways. A Flushing Plan for Stream 2C4 was approved on August 16, 2023. A Preliminary Air Sampling and Analysis Plan was approved on August 16, 2023. TCEQ continued to monitor cleanup activities, dam integrity, and review sample results. TP&W visited several locations to observe cleanup and wildlife response activities along Duck Creek and Stream 2C4. No impacted wildlife was observed. As of 8/16/2023, TP&W documented that 1,088 animals were killed due to the incident.

Sherwin Williams continued the recovery process of AFFF impacted waters at the Wynne Park dam location and conducted community air monitoring near the dam location. No VOC readings above instrument detection limits were observed in the nearby community. Sherwin Williams continued pumping water downstream of the Wynne Park dam location. Sherwin Williams also continued door-to-door requests to obtain access to residential properties. Sherwin Williams continued drone operations to collect aerial imagery.

8/17/2023

EPA continued providing oversight and documentation of Sherwin Williams containment and recovery efforts and surface water sampling efforts. Sampling continued at the 10 fixed locations in impacted waterways. The approved 2C4 Flushing Plan took effect on August 17, 2023, at approximately 12:00. Sherwin Williams began by utilizing a fire hydrant on Sherwin Williams property to flush the storm water drain. Upon successful completion of the storm water drain flush, Sherwin Williams utilized frac tanks to continue flushing water through Stream 2C4. Sherwin Williams began deconstructing Dam 2 and transporting material from the dam to CM Hinton Jr Regional Landfill for use as cover material.

TCEQ conducted air monitoring of the aeration efforts immediately upstream of Dam 1. TCEQ continued to monitor cleanup activities, dam integrity and deconstruction, and review sample results. TP&W visited several locations to observe cleanup and wildlife response activities along Stream 2C4. During the visits, there were no impacted fish or wildlife observed. TP&W monitored stream 2C4 as the flushing plan was being executed and reported no additional wildlife impact. As of 8/17/2023, TP&W documented that 1,088 animals were killed due to the incident. Sherwin Williams continued the recovery process of AFFF impacted waters at the Wynne Park dam location and conducted community air monitoring near the dam location. No VOC readings above instrument detection limits were observed in the nearby community. Sherwin Williams continues pumping water downstream of the Wynne Park dam location. Sherwin Williams also continued door-to-door requests to obtain access to residential properties. Sherwin Williams continued drone operations to collect aerial imagery.

8/18/2023

EPA continued providing oversight and documentation of Sherwin Williams containment and recovery efforts and surface water sampling efforts. TP&W visited several locations to observe cleanup and wildlife response activities along Stream 2C4. TP&W did not observe any impacted wildlife. As of 8/18/2023, TP&W has documented that 1,088 animals were killed due to the incident. TCEQ demobilized from the Site and transitioned out of the Unified Command, however, they will continue to provide oversight of the dam deconstruction efforts and the release of water at the Wynne Park dam locations.

Sherwin Williams continued to collect surface water samples at the 10 fixed surface water sampling locations in impacted waterways. Sherwin Williams continued recovering foam at Dam 1, deconstructing of Dam 2, and flushing Stream 2C4 and Duck Creek. Sherwin Williams is also pumping water downstream of the Wynne Park dam location. Sherwin Williams continued to decontaminate impacted portions of their facility. The facilities drainage lines, concrete sump area, and roadways are being cleaned and decontaminated with water jetting, vacuum trucks, and pressure washing. The storm water system inside the facility has been sealed and locked to prevent further contamination. Wastewater and solids are being collected and stored for sampling and disposal. Sherwin Williams also continued door-to-door requests to obtain access to residential properties.

Current Analytical Summary:

The following chemicals were found in Stream 2C4 and Duck Creek between 8/7/2023 and 8/10/2023: antimony, lead, manganese, benzene, n-butanol, and 1,4-dioxane. Lead and n-butanol were the only chemicals observed above site-specific screening levels on multiple occasions during this time. Lead was the only chemical found above site-specific screening levels during the 8/11/2023 and 8/12/2023 sampling efforts. Lead and 1,4-dioxane were detected above site-specific screening levels during the 8/13/2023 sampling efforts; however, 1,4-dioxane was not detected in the duplicate quality control sample collected at the same time and location. The exceedance of 1,4-dioxane was detected from a sample collected downstream of the dam locations. Due to the difference in the sample and the quality control sample and the location the sample was collected, the 1,4-dioxane exceedance appears to be a false positive that is not representative of site conditions. There were three exceedances of lead from the surface water samples collected on 8/14/2023. The exceedances were observed in Stream 2C4 in a location close to Tinsley Park, in

Duck Creek next to the Wynne Park dams, and in the East Fork Trinity River in a location 30 miles downstream of the Wynne Park dams. There were no exceedances of lead in any samples collected between the Wynne Park dams and in the location 30 miles downstream of the dams that had a lead exceedance. The drainage area of Stream 2C4 has legacy sources of lead which may be associated with the exceedances. There were no chemicals with exceedances above site-specific screening levels for the 8/15/2023 to 8/16/2023 sampling efforts. There have been no observed levels of per or polyfluoroalkyl substances (PFAS) compounds associated with firefighting foam or aqueous film forming foam (AFFF) above site-specific screening levels from samples collected in impacted waterways between 8/7/2023 and 8/16/2023.

2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)

The Potentially Responsible Party (PRP) is Sherwin Williams.

2.1.4 Progress Metrics:

Waste Stream	Medium	Quantity	Manifest #	Treatment	Disposal
AFFF/Firefighting water	Water/Product Mixture	~1,540,000 gallons	Various	N/A	

2.2 Planning Section

2.2.1 Anticipated Activities

2.2.1.1 Planned Response Activities

EPA and TP&W will remain on-site to oversee and document Sherwin-Williams' containment and recovery efforts, sampling operations, and wildlife impact assessment efforts.

Sherwin-Williams will continue recovery efforts using vacuum trucks and frac tanks to recover AFFF fluids and firewater from impacted waterways. Sherwin Williams will flush and wash Stream 2C4 at the recommendation of EPA. Sherwin-Williams will monitor the deconstruction and/or maintenance of the containment structures (dams, berms, etc.). Sherwin-Williams will continue to pump water downstream of the Wynne Park dam location. Sherwin-Williams will continue community outreach efforts to obtain access agreements to portions of Stream 2C4 and Duck Creek which run through residential properties. Sherwin-Williams will continue to execute the 2C4 Flushing Plan as planned. CTEH and TCEQ will conduct air monitoring during the flushing event using handheld monitors for VOCs. Upon completion of the 2C4 Flushing Plan and TCEQ approval, Dam 1 will be deconstructed and the upstream facing half will be placed into containers pending waste characterization. The downstream facing half of Dam 1 will be returned to the dredge piles that it was pulled from.

2.2.2 Issues

The City of Garland continues to receive reports of foul odors coming from Stream 2C4.

2.3 Logistics Section

No information to report.

2.4 Finance Section

2.4.1 Narrative

No information to report at this time.

2.5 Other Command Staff

2.5.1 Safety Officer

No information to report.

2.5.2 Liaison Officer

The LNO communicated the following information to downstream municipalities:

The Environmental Protection Agency (EPA) and the Texas Commission for Environmental Quality (TCEQ) are overseeing the pumping and remediation of impacted waterways in the area around the Sherwin-Williams Shiloh Road Plant fire response in Garland, TX. Analysis of water sampling data shows that contaminant concentrations and detections have decreased throughout the week. It has been determined it is safe to release the waters being held by the retention dam in Duck Creek to restore the water flow to natural levels. The water in the East Fork Trinity River is safe for agricultural use again. The situation will continue to be monitored and samples taken from affected waterways to minimize impacts to human health and the environment. The continued sampling is located at 10 fixed locations in Duck Creek spanning 53 river miles into the Trinity River.

Public Resources:

<https://response.epa.gov/SherwinWilliamsPlantFireResponse> / (EPA Response Website)

<https://www.garlandtx.gov/>

<https://sherwin-williams-plant-fire-response-epa.hub.arcgis.com/> (EPA Response Interactive Hub Site)

garlandresponse@sherwin.com (Sherwin-Williams incident email address)

2.5.3 Information Officer

No information to report.

3. Participating Entities

3.1 Unified Command

EPA and Sherwin Williams will continue to operate in Unified Command.

3.2 Cooperating Agencies

EPA is working closely with the following federal, state and local agencies during this response: US Department of the Interior, US Fish and Wildlife Service, Texas Parks and Wildlife Department, TDEM, TCEQ, City of Garland, Dallas County Emergency Management, and the North Texas Municipal Water District.

4. Personnel On Site

- EPA FOSCs - 2
- EPA START - 4
- City of Garland Emergency Management
- Sherwin Williams
 - Miller Environmental
 - Center for Toxicology and Environmental Health (CTEH)
 - TAS Environmental
 - Cactus Environmental
 - Witt O'Brien's

5. Definition of Terms

above ground storage tank (AST)

aqueous film-forming foam (AFFF)

Airborne Spectral Photometric Environmental Collection Technology (ASPECT)

Center for Toxicology and Environmental Health (CTEH)

chemicals of concern (CoCs)

EPA Federal On-Scene Coordinator (FOSC)
Garland Fire Department (GFD)
Garland Police Department (GPD)
Liaison Officer (LNO)
meter (m)
particulate matter less than 2.5 micrometers in diameter (PM 2.5)
parts per million (ppm)
polyfluorinated compounds (PFCs)
Potentially Responsible Party (PRP)
Superfund Technical Assessment and Response Team (START)
Texas Commission of Environmental Quality (TCEQ)
Texas Parks and Wildlife Department (TPWD)
Unified Command (UC)
volatile organic compounds (VOCs)

6. Additional sources of information

6.1 Internet location of additional information/report

Additional information may be obtained at response.epa.gov/SherwinWilliamsPlantFireResponse.

6.2 Reporting Schedule

A progress POLREP will be submitted as determined appropriate by the EPA OSC and a final POLREP will be submitted upon completion of the response.

7. Situational Reference Materials

No information available at this time.